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reduces farm repairs..



Preventive maintenance--called "PM" for short --is a term with special meaning for farmers depending on farm machinery to get high-level output of crops and livestock products this year.

"PM" is simply regular farm machinery upkeep that has marked efficient farm management ever since mechanization got its start on American farms. For it briefly denotes the key to basic machinery maintenance--preventing breakdowns by making repairs before they are needed.

"PM" also calls for regular oiling and greasing, keeping bolts tight, and adjusting each machine for best operation. Good machinery operators follow a regular schedule of lubrication, inspection, and adjustment--extending the useful lives of machines just as periodic physical examinations bolster human lives.

Machinery breakdown at a critical time could mean the loss of all or part of a crop, U. S.



Department of Agriculture engineers point out. Timely attention to machines not only prevents accidents which put machines out of operation but accidents affecting the operators themselves. Either kind produces expensive delays in a farm production program.

Preventive maintenance has its special part to play in supporting the defense production effort on the Nation's farms. In contributing to the abundant production flow from farms, "PM" supports the output of food and fiber essential for both civilian and military strength. In forestalling breakdowns and saving on demand for new machinery and parts, "PM" also helps conserve critical materials which go into making of farm machines and military equipment alike.

In the past, say Department engineers, it has been common to stress doing repair and conditioning jobs during the winter and other slack seasons. It is still good advice, they say, but today power machinery is so important in farming and man-hours so valuable that conditioning and repair of machines may well be a front-line job at any time of the year.

Some repair jobs which qualify as "PM" may even take priority over field work and other production time. Putting on or repairing safety parts or sharpening cutting edges, for example, will save both time and power in the long run.

1. Machines can rust out quicker when neglected than they wear out under normal usage and with good care. A rust preventive on frictioning parts when machines are not in use pays dividends later in longer life expectancy of the machines. N-11769



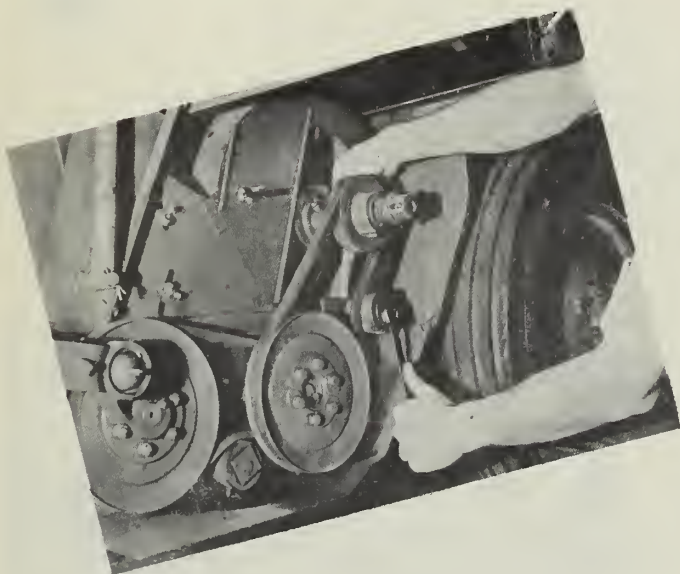
2. Welding the break in the frame of this disk harrow may prevent a more serious break-down later when the machine is badly needed. The steel of modern disk harrow blades is highly resistant to nicking and edge turning but the cutting edges do a better job with less power if kept sharp. N-11382

3. Engines are the source of production power on several million farms. They must be kept in good repair and running order so as not to waste growing time and scarce labor. Good valve seating, for instance, means more efficiency for the man who operates the tractor. N-5445



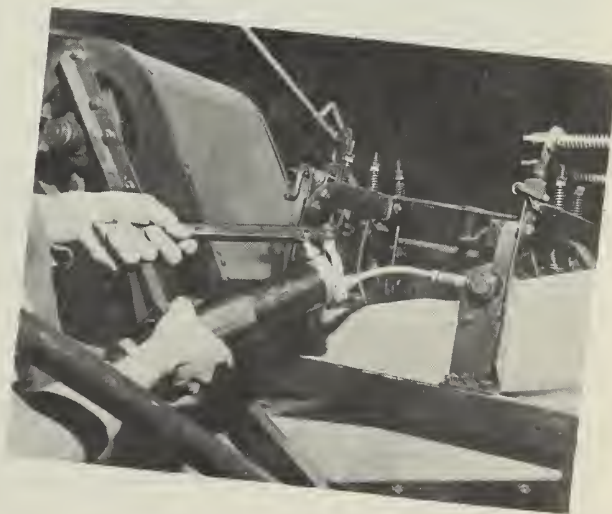
4. An alert and efficient operator is the most important part of any machine. Moving parts of machines, such as the tractor power take-off, can kill or maim the operator or delay him if not covered and kept covered with a shield. N-11765

5. Shelter, conditioning, and care of equipment become increasingly important with greater mechanization in farming. Unless machines are in good order when the field work starts, time of both men and machines and sometimes a part of the crop may be wasted. N-11772



6. Attention to tension saves power that otherwise slips away. Slippage not only wastes power and time; it also wears out belts and other parts and may cause fire. It is one of the simplest faults to detect and adjust. N-11770

7. "Put the oil where the squeak is" was a good rule when few machines turned faster than a grindstone or wagon wheel. It's still a good rule, but today only the reckless let friction catch up with them. Grease cups and fittings for forced greasing and oiling make regular lubrication an easy task. N-11778





9. Any tractor with a poorly-adjusted carburetor is like a sore-footed animal; it can't do much work. The construction and plan of operation of the tractor carburetor should be known to every owner for cleaning, adjustment, and repair. N-11777

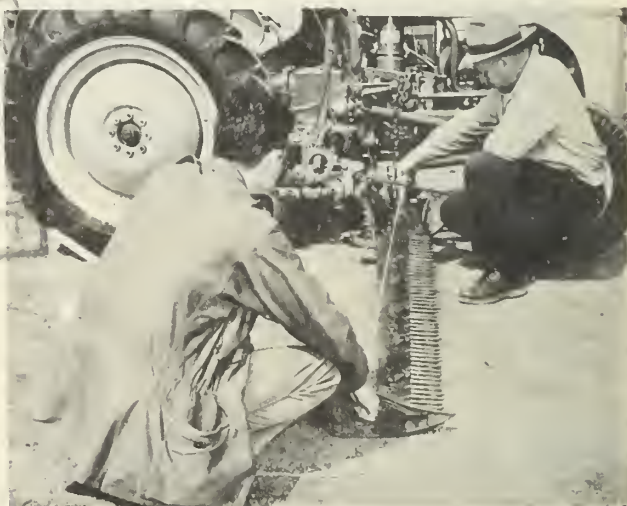
8. A plow inactive in summer months may need an anti-rust seal even more than in winter. Once such treatment of implements has become a habit and there's "dope" in the can, little time is needed. N-11751



10. The operator's manual should be the care and maintenance guide for every farmer who wants to get the most from his machinery dollar. It's a good idea to have a special bookcase, say USDA agricultural engineers, for keeping operator's manuals, tool books, and similar information that may be needed in a hurry. N-11763



11. Nowadays power mowers are in use almost every day on most farms. Proper alignment of the cutter bar, with just the right "lead" is essential for good work and efficient use of power. Prompt replacement of dull or broken sections, worn ledger plates, and straightening or replacement of bent or broken guards are also important. N-11841



8x10 glossy photographs of this series are free to writers and editors on request to the Press Service, Office of Information, USDA, Washington 25, D. C.